

Stress, Social Status, and Psychological Distress

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It has long been known that persons in socially disadvantaged statuses are particularly likely to exhibit symptoms of psychological distress. Why this is so remains the subject of controversy. This paper sheds some light on the controversy by analyzing survey data on stress, social status, and psychological distress. Two components of the status-distress relationship are isolated empirically: (1) a differential exposure to stress component, interpretable as one sort of social causation influence; and (2) a component due to the differential impact of comparable stresses on people in different categories of various status dimensions. The analysis shows that differential impact is the more important determinant in relationships between social class, sex, and marital status and self-reported distress. Only in the comparison of whites to nonwhites is differential exposure the key determinant. The implications of these findings for our understanding of the social status-psychological distress relationship are discussed.

A central problem to emerge from the study of sociodemographic correlates of mental disorder has been to explain why persons in certain disadvantaged social statuses have the high rates of emotional distress they do. The earliest work on this problem concerned itself with social class (Faris and Dunham, 1939; Hollingshead and Redlich, 1958; Langner and Michael, 1963). But over the last two decades a great deal of research has also been directed toward the overrepresentation of certain emotional problems among the unmarried (Bachrach, 1975), women (Weissman and Klerman, 1977), and nonwhites (Dohrenwend and Dohrenwend, 1970).¹

Two general sorts of explanations have been offered for the relationship between disadvantaged social status and emotional distress. (1) The first says that persons who either have chronic emotional problems, or are prone to develop such problems, are channeled into the ranks of the unmarried and into the lower class, the latter channeling possibly taking

place over a succession of generations and being characterized by an inability to move up, as well as by a tendency to drift down, the class hierarchy. This explanation has been associated with the "drift" hypothesis in the literature on social class and mental illness, and with the "social selection" hypothesis in the literature on marital status and mental illness. However, it is better described generically as a "constitutional frailty" explanation,² because it emphasizes intrapsychic propensities to distress rather than environmental influences. (2) A second set of explanations, on the other hand, has emphasized the importance of life conditions as determinants of emotional disorder. Although not limited to one hypothesis, these explanations have been dominated by the view that exposure to stressful experiences leads to emotional distress and that the distribution of stressful experiences in society accounts for differential rates of emotional problems. Together these two explanations suggest that socially disadvantaged persons will be both more highly exposed to stressful experiences and also more highly influenced by stressful experiences than socially advantaged persons.

Documentation of the influence of differential exposure, if it could be done, would demonstrate that the greater psychological distress of disadvantaged persons is due, at least in part, to greater exposure to distress-provoking environmental experiences. In contrast, there are a number of ways to interpret a differential

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impact across two sets of individuals. One is in terms of psychic frailty. That is, because of their relative inability to manage stressful situations—their lack of social competence—some people might exhibit a great deal more emotional distress than others who are more robust. The sociocultural environment can be the direct source of differential impact in a number of ways. One of these is by determining the subjective meanings of objective events. Life situations are not inherently stressful, of course. They must be interpreted. These interpretations, in turn, are partly dependent on the context of one's life, the relevancies and circumstances to which one selectively attends. To the extent that social status shapes interpretations of life experiences, the subjective stressfulness, and thus the impact, of these experiences will vary with status.

There are also a number of ways in which the social environment can modify the impacts of stress events as they are subjectively experienced. One of these is by influencing the coping strategies used by persons subjected to stress. Just as objective occurrences are interpreted through subjective filters, so one's options are determined by subjective appraisals of availability and efficacy. One's position in the social structure also defines one's access to various resources that can be useful in dealing with stress. The stress-buffering effects of social support systems have been widely discussed (Cobb, 1976; Dean and Lin, 1977; Kaplan and Cassel, 1977; Mechanic, 1974), as have the more obvious advantages of political and financial power.

Empirically it is very difficult to disentangle these various modifying influences. However, a researcher can estimate the relative importance of differential impact in explaining the relative functioning of two or more sets of individuals without teasing out all the various influences that go to make up this differential impact. In the analysis reported below, this is exactly what is done. A set of stress measures are used to predict self-reported emotional distress among a sample of persons interviewed in a major epidemiological survey. I examine the relative importance of differential exposure to these stresses and of differential impact of comparable stresses in accounting for observed relationships between various

disadvantaged social statuses and an indicator of emotional functioning. As shall be seen, this analysis sheds light on why persons in less advantaged social statuses are in relatively poor emotional health.

METHOD

Data

The data used here come from the Myers et al. (1972, 1974, 1975) New Haven survey. The sample consists of 720 persons interviewed both in 1967 and 1969 from a larger random sample of adults in the New Haven mental health catchment area.

The interviews included a series of questions about exposure to potentially stressful life experiences that might lead to psychological distress. I have focused on five summary measures for purposes of this analysis. Three of these are life-event scales, created from a list of 56 events in the interview. All of these scales pertain to life events occurring during the two years between the two data points of the panel. The other two stress measures pertain to ongoing life situations that can be stressful.³ The first is a measure of financial status, defined as a ratio of income to number of family members supported by this income. The second is a measure of physical illness, defined as a weighted sum of self-reported symptoms.⁴

There has been considerable debate in the life-events literature about the best way to conceptualize global event indexes (B. P. Dohrenwend, 1974; Dohrenwend et al., 1978; Vinokur and Selzer, 1975). To provide as broad an analysis as possible, results are shown here for each of two separate event conceptualizations. The first uses raw counts of undesirable, desirable, and total life events as the three indexes of exposure.⁵ This unweighted coding scheme is one that has been used in much of the work reported in the life-events literature. The second employs weighted counts of desirable and undesirable events and a dummy variable to describe those who have experienced no events at all over the course of the panel. The weights used here are those presented in Holmes and Masuda (1974) for the life-change units (LCU) scale. The weighted coding scheme is a modification of the Myers et al. (1974) Desirability-Change Life Events Index.⁶

The measure of emotional distress used here is Macmillan's (1957) symptom checklist scale as modified by Gurin et al. (1960). The scale is made up of 20 statements about bodily feelings that indicate moods of depression and anxiety. Over the course of the two years, the scale has a stability coefficient of from .50 (females) to .56 (married) in the subsamples examined here, which can be taken as a lower bound on the reliability of the scale.⁷

Although the symptoms included in this scale are taken from those presented by patients in treatment, it should be recognized that they do not tap a person's need for treatment. Nor do they allow one, in a community sample, to define psychiatric "cases." However, the scale does permit respondents to be ordered on a continuum of reported distress. Scores on the scale range from 20 (all symptoms are reported as occurring "often") to 80 (all symptoms are reported as occurring "never"). The sample-wide mean was 72.8. Only 16% of the sample reported extreme distress, defined, following Myers et al. (1974), as a score of 66 or lower.

Analysis Strategy

I have recently presented an analysis strategy for studying the relative importance of differential exposure to stress and differential impact of stress (Kessler, 1979). This strategy is used below to compare men with women, whites with nonwhites, the married with the unmarried, and persons in the lower class with persons in the middle and upper classes.

The strategy is based on a model of the causal nexus between stress and emotional functioning that assumes emotional distress (P) is influenced by exposure to stressors (S) acting on persons who vary in the extent to which stress influences their emotional functioning (V). I assume that this impact varies depending on the intrapsychic defenses and social resources used by the individual to interpret and manage the stresses to which he or she is exposed. This model can be expressed as a prediction equation for a particular set of stressor measures, where V is expressed as a metric regression coefficient. The comparison strategy consists of, first, estimating models of this sort in subsamples and, next, systematically comparing observed differences in emotional

distress across these subsamples in terms of the estimation equations obtained in the subsamples.

If we take as our model

$$\bar{P} = \Sigma V(\bar{S}) + a, \quad (1)$$

then we can systematically compare averages in the distress score between two subsamples (g, h) in terms of the following decomposition (Winsborough and Dickinson, 1971).

$$\begin{aligned} \bar{P}_g - \bar{P}_h &= \Sigma \bar{S}_h(V_g - V_h) + \Sigma V_h(\bar{S}_g - \bar{S}_h) \\ &\quad + \Sigma (V_g - V_h)(\bar{S}_g - \bar{S}_h) \\ &\quad + (a_g - a_h). \end{aligned} \quad (2)$$

If we take as our model

$$\ln [\bar{p}/(1-\bar{p})] = V(\bar{S}) + a, \quad (3)$$

then we can systematically compare odds of extreme distress (treated as a dummy dependent variable, where p_i is the predicted probability that person i is extremely distressed and $\bar{p} = \Sigma p_i/n$) in terms of the following decomposition (Kessler, 1979):

$$\begin{aligned} \frac{\ln [\bar{p}/(1-\bar{p})]_g}{\ln [\bar{p}/(1-\bar{p})]_h} &= e^{\Sigma \bar{S}_h(V_g - V_h)} \\ &\times e^{\Sigma V_h(\bar{S}_g - \bar{S}_h)} \\ &\times e^{\Sigma (V_g - V_h)(\bar{S}_g - \bar{S}_h)} \\ &\times e^{[a_g - a_h]}. \end{aligned} \quad (4)$$

These decompositions perfectly divide average differences in distress into components due uniquely to each of four conceptually distinct influences.⁸ In both equations (2) and (4), the first component is a differential exposure effect; the expected result of giving members of status category g the exposures found to characterize members of status category h . The second component in each of these equations is a differential impact effect; the expected result of giving members of status category g the impact coefficients of persons in status category h . The third component is an empirical estimate of the interaction between the impact and exposure components. The last component is a residual, representing the difference in distress between persons in the two contrast categories standardized on the influences modeled in the prediction equations.

The exposure and impact components are of the most substantive interest, for they tell us

the relative importance of differential stresses and differential influence of comparable stresses on symptom differences across the two status subsamples. The interaction term represents the extent to which the symptom differences explained by the prediction equations cannot be attributed uniquely either to subsample differences in exposure or to differences in impact. When the interaction component is large relative to the exposure and impact components, then it becomes impractical to place a great deal of emphasis on the relative magnitudes of the latter two components.

In the analyses below, equations of the form (1), (3) are estimated separately for a series of status category subsamples. These equations are then decomposed by means of (2), (4) to evaluate the relative importance of differential exposure and differential impact on the observed variations in self-reported distress between the contrasted subsamples.

RESULTS

A number of critics of the life-events approach to studying psychological distress have noted that distressed persons frequently expose themselves to stress (Brown, 1974; Dohrenwend et al., 1978; Rabkin and Struening, 1976). Therefore it cannot be automatically assumed that relationships observed between exposure and emotional disorder are due solely to the causal impact of stress on distress. The causal influence might work the other way around. One way to guard against this sort of confounding is to include in one's event indexes only those events that are relatively unaffected by the prior emotional functioning of the focal respondents (Brown, 1974). However, this approach forces the analyst to discard the life stresses that discriminate most clearly between persons in socially advantaged and disadvantaged status categories—such events as job layoff, arrest, eviction from one's home, and marital dissolution. Fortunately, the fact that this analysis is concerned with panel data makes it possible to adjust for the confounding of causal direction in another way, by controlling Time 1 distress in the decompositions. In this way I can include events that might be partially confounded by selection effects in the indexes and partial out these effects

by means of statistical controls. Therefore, in each of the decompositions reported below I sequentially include and delete the initial distress scale as a way of assessing the influence of selection on my results.

Decomposition of mean differences in the distress scores of two contrast subsamples lets us glimpse the forces that make "typical" persons in the subsamples differ from each other in emotional functioning. Decompositions of differences in the likelihood of extreme distress give us a somewhat different view, one of "extremes" rather than typical persons. It is not always the case that stress influences typical and extreme patterns in the same way. In several cases below we find that the typical person in subsample A is less highly influenced by a stress than the typical person in subsample B, but that this stress leads to a higher proportion of extreme distress in subsample A than in B. The two patterns together describe one subsample (A) in which most people are unaffected by stress but in which those who are influenced respond in an extreme fashion, and another subsample (B) in which most people are affected by stress but in which few of these people respond in an extreme fashion.

Tables 1 and 2 present R^2 coefficients for the 36 OLS regression and 36 individual-level logit equations used to estimate (1), (3) respectively, for the decompositions to be discussed below. Comparison of the coefficients in Tables 1 and 2 shows that the estimation equations more completely predict the distress scale than the "extreme" distress dummy variable. This result is to be expected, since the sizable skew in the extreme distress dichotomy has the effect of attenuating correlations between predicted and observed scores.

The first two coefficient columns in each table are taken from equations estimated with the unweighted predictors. The third and fourth coefficient columns are taken from weighted-predictor equations. Comparison of the coefficients in these columns shows that the unweighted predictor set has a higher relationship to the distress scale than the weighted set in 35 of the 36 pairs of coefficients. I do not want to enter into the controversy about the "best" way to conceptualize life-event scales here. However, in examining the results of the decompositions reported below, one should bear in mind that

TABLE 1. Coefficients of Multiple Determination in the Subsample OLS Regression

	(N)*	R ²			
		Unweighted	Unweighted with G ₁	Weighted	Weighted with G ₁
Men	(318)	.214	.417	.196	.402
Women	(402)	.222	.379	.127	.327
Classes I-III	(173)	.101	.368	.069	.331
Classes IV-V	(547)	.238	.400	.168	.361
Class V	(223)	.334	.454	.192	.378
White	(627)	.185	.386	.136	.355
Not white	(90)	.387	.473	.238	.349
Married	(541)	.149	.371	.097	.340
Sep/div	(42)	.474	.579	.332	.440

Note: All coefficients are significant at $p < .05$. Both unweighted and weighted predictor sets include income per family member and the scale of physical health complaints as well as the three life-events indexes. G₁ refers to the Time 1 Gurin symptom scale.

*Missing values on the predictors were assigned mean scores. Complete data are available for the criterion.

the distress scores measured in this particular sample are better predicted by the unweighted predictor set.⁹

Social Class

The literature on social class and mental illness has emphasized the importance of the distribution of stress across classes as the key determinant of class differences in emotional disorder (Markush and Favero, 1974; Myers et al., 1974). However, there is good theoretical reason to believe that there should also be class differences in the impacts of stress. The social selection hypothesis, for one, argues that lower class persons who have drifted down from higher status families of origin, or who have

been unable to move beyond the position of their birth, are socially incompetent and highly influenced by stress. Lower class people appear to be at a disadvantage with respect to learned coping responses. In their Chicago study, Pearlin and Schooler (1978) found that income and education were both positively correlated to the use of coping strategies and to the possession of intrapsychic coping resources found to be effective in managing stress. There is also considerable indirect evidence (Dohrenwend and Dohrenwend, 1970) that lower class people have low access to social supports. These, in turn, are now believed to be extremely important resources in helping a person cope with life problems (Liem and Liem, 1978:148-51).

TABLE 2. Coefficients of Multiple Determination in the Subsample Logits

	(N)*	R ²			
		Unweighted	Unweighted with G ₁	Weighted	Weighted with G ₁
Men	(280)	.195	.272	.175	.257
Women	(344)	.146	.297	.099	.265
Classes I-III	(148)	.082	.292	.084	.280
Classes IV-V	(476)	.176	.299	.133	.265
Class V	(189)	.240	.325	.184	.285
White	(541)	.120	.241	.083	.214
Not white	(81)	.298	.450	.329	.435
Married	(478)	.088	.269	.055	.245
Sep/div	(39)	.654	.725	.379	.284

Note: All coefficients are significant at $p < .05$.

*Listwise deletion of missing values was used.

Table 3 presents the results of 16 decompositions in which differential impact and exposure are compared across social class categories.¹⁰ The first panel (A) compares people in the middle and upper classes (I-III) with those in the lower and lowest classes (IV-V). The second panel (B) compares those in classes I-III with the very lowest class (V). With only one exception the results in these two panels are consistent with each other.

In terms of mean differences in self-reported distress, the data are quite clear in showing that the lower classes are disadvantaged in two respects: They are exposed to more stressful experiences than upper class persons, and comparable events impact on their emotional functioning more severely than on the functioning of upper class persons. For instance, line 6b shows that the 2.08-point difference in mean symptoms between persons in classes I-III and V is made up largely of (1) a 1.00-point difference due to the greater slopes of distress on the stress measures in the regression for the lower class subsample, and (2) a .68-point difference due to the higher mean levels of stress

in the lower class subsample. The interaction and residual components are comparatively much less important, contributing a combined difference of only .35 points. With only one exception, the eight contrasts of mean differences show that the differential impact of comparable stressors is more important than differential exposure to stress. The exception is the weighted prediction of classes I-III vs. classes IV-V in which the Time 1 distress scale was included as a predictor. Here the exposure component (-.83) is sizably larger than the impact component (-.39).¹¹

These patterns are consistent with the data reported by Dohrenwend (1973), who found that the poor in her urban sample were exposed to more stresses than persons in the middle class and also that the relationship between exposure and distress was higher in the lower than in the middle class. However, my results are at odds with the findings of Myers et al. (1974) who, analyzing the New Haven data, reported that "the relationship between social class and psychiatric symptoms is a reflection of social class differences in the distribution of

TABLE 3. Decomposition of Class Differences in Self-Reported Distress

Predictors	Impact	Exposure	Interaction	Residual	Total
A. Classes I-III versus Classes IV-V					
<i>Decomposition of Observed Mean Differences (I-III-IV-V)</i>					
1a Unweighted	-1.87	-1.44	.47	1.44	-1.37
1b Unweighted with G_1	-1.11	-.90	.09	.52	-1.37
2a Weighted	-3.53	.01	-.74	2.89	-1.37
2b Weighted with G_1	-.39	-.83	.24	-.37	-1.37
<i>Decomposition of Predicted Relative Odds* (I-III/IV-V)</i>					
3a Unweighted	.52	-.66	.35	-.38	.84
3b Unweighted with G_1	.72	-.46	.12	-1.05	.52
4a Weighted	1.47	-.68	.62	-1.68	.77
4b Weighted with G_1	.76	-.52	.64	-1.53	.52
B. Classes I-III versus Class V					
<i>Decomposition of Observed Mean Differences (I-III-V)</i>					
5a Unweighted	-2.97	-2.53	1.21	2.21	-2.08
5b Unweighted with G_1	-2.37	-1.17	.11	1.34	-2.08
6a Weighted	-2.54	-1.99	1.91	.59	-2.08
6b Weighted with G_1	-1.00	-.68	-.19	-.16	-2.08
<i>Decomposition of Predicted Relative Odds* (I-III/V)</i>					
7a Unweighted	.55	-1.36	.91	-.55	.63
7b Unweighted with G_1	.65	-.82	.32	-1.24	.32
8a Weighted	1.53	-.81	.73	-2.23	.46
8b Weighted with G_1	1.79	-1.17	1.17	-2.66	.41

*Logit decompositions are expressed in additive form. The "Total" column is the ratio of mean relative odds for the contrast categories. For instance, in row 3a, the predicted probabilities of extreme distress for persons in classes I-III and IV-V at the means of the independent variable are .113 and .131 respectively. This yields a relative odds $[(.113/(1-.113))/(.131/(1-.131))]$ of .84. This total is equal to the product of the exponentiations of the four components of the decomposition.

Desirability-Change Life Events in the community" (Myers et al., 1974:199-200). Their analysis failed to consider impact differentials, thus masking the greater importance of impact than of exposure in the data.

The second set of decompositions in Table 3 focuses on extreme distress. With extreme distress defined as a scale score of 66 or lower, 13% of those in classes I-III, 17% of those in class IV, and 21% of those in class V report extreme distress at Time 2 of the panel (I-III vs. IV-V: $t = 1.3$, NS; I-III vs. V: $t = 2.07$, $p < .05$). The results here are unlike those for mean symptoms in one striking respect. Persons in classes IV and V are *less* likely than those in classes I-III to become extremely distressed when exposed to comparable stresses. Despite this advantage, the poor report more extreme distress. The much greater exposure of the poor to stressful experiences cancels out their relative advantage in effectively buffering stress impacts.

This result is quite consistent, occurring in all eight decompositions of the set. The impact components are always positive, indicating lower impacts among the lower classes. There is no systematic magnification or diminution of the effect when Time 1 distress is controlled. The effect is more evident, though, when classes I-III are compared only with class V than when compared with IV and V together.

This intriguing pattern will not be pursued very deeply here. As we shall see below, though, it appears again in the comparison of whites and nonwhites. What we see is that typical lower class persons respond more to stress than do typical upper class persons. This is to be expected, given the lower levels of social support, the less effective coping strategies, the secondary stresses set off for lower class persons when serious life crises come up, and the myriad other ways in which the poor are disadvantaged relative to the rich in terms of managing stress. However, we find proportionally fewer among the poor who respond to stress with really extreme distress than among those who are more advantaged economically and socially.

One interpretation of this pattern worthy of future work is that lower class persons are accustomed to stressful experiences and, as a result, seldom have extreme emotional responses to stress. That is, objective stressors

might not have the same subjective meanings for lower and middle class people. Another is that lower class people, even though experiencing the same feelings of helplessness and hopelessness as middle class people, have learned to adopt a more flexible style of emotionality. We do not know enough about the sociology of emotions to assess this possibility systematically. But it is general clinical lore that people vary between very rigid and very flexible styles of emotionality. Flexible people tend to react quickly and with great emotion to stress, but seem to recover quickly, too. Rigid people, on the other hand, tend not to bend, only to break. As a result, when they do become emotional they tend to do so uncontrollably. It is quite possible that the flexible and rigid styles characterize lower and upper class persons respectively; such a possibility would account for the anomalous patterns of stress impact observed in these data.¹²

Race

Of all the contrasts examined in this paper, there is least support in the data, and in the literature at large (Dohrenwend and Dohrenwend, 1969:31; Warheit et al., 1973, 1975), for a relationship between race and psychological distress. With "nonwhites" defined as those in the sample who describe themselves as either "Negro" or "Puerto Rican," no significant difference exists in the average distress scores of whites and nonwhites (73.0 vs. 71.8, $t = 1.4$, NS).¹³ However, nonwhites are twice as likely as whites to report extreme distress (28% vs. 14%, $t = 2.72$, $p < .05$).

Table 4 represents the results of eight decompositions between whites and nonwhites in the sample. I will have little to say about these results, for they closely parallel those described for the social class contrasts in Table 3 with respect to the reversal of signs for the impact components between the decomposition of averages and the decomposition of extreme scores. I believe the same considerations apply here as in the earlier discussion of those results.

There is one respect, though, in which the results for whites and nonwhites contrast with the results reported above for social class; namely, that the greater distress among nonwhites than among whites is far more a func-

TABLE 4. Decomposition of White-Nonwhite (Negro and Puerto Rican) Differences in Self-Reported Distress

Predictors	Impact	Exposure	Interaction	Residual	Total
<i>A. Decomposition of Observed Mean Differences (White-Nonwhite)</i>					
1a Unweighted	.15	-2.30	1.07	-.14	-1.22
1b Unweighted with G_1	-.10	-1.56	.67	-.23	-1.22
2a Weighted	-.67	-2.11	1.07	.48	-1.22
2b Weighted with G_1	.86	-1.23	.47	-1.35	-1.22
<i>B. Decomposition of Predicted Relative Odds* (White/Nonwhite)</i>					
3a Unweighted	.71	-1.24	.94	-1.05	.53
3b Unweighted with G_1	.69	-1.19	1.00	-1.07	.57
4a Weighted	.42	-1.16	.76	-.68	.51
4b Weighted with G_1	.36	-1.05	.25	-.60	.58

Note: Entries have been rounded to two decimal places from computations based on five decimal places. As a result, totals may not correspond exactly to those predicted by adding or multiplying the components.

*See note to Table 3.

tion of differential exposure to stress than was found to be the case in the greater distress of lower class persons. As we see in panel A of the table, the average difference in self-reported distress between whites and nonwhites is much more a function of the many stressful experiences to which nonwhites are exposed than of any impact differential between whites and nonwhites. Indeed, in two of the four contrasts the impact coefficient is positive, which means that comparable stresses have more impact on whites than nonwhites. Panel B shows that nonwhites have an impact advantage over whites when considered in terms of extreme distress. However, in none of the four decompositions is this advantage great enough to overcome the greater exposure of nonwhites to stress.

Sex

Over the last decade a great deal has been written about sex roles and their meanings for

male and female mental illness (Gove, 1972; Gove and Tudor, 1973; Pearlin, 1975; Radloff, 1975; Weissman and Klerman, 1977). The emphasis in this literature has been on the unique experiences of women in our society as housewives and mothers and on the stresses associated with these experiences. It has been argued that exposure to these stresses accounts for the preponderance of women among the mentally ill (Gove and Geerken, 1977).

Less has been written about how men and women might differ in their vulnerability to stress. However, both biological arguments about female constitutional frailty (Weissman and Klerman, 1977) and sociocultural arguments about learned helplessness (Kaplan, 1977) and ineffective coping (Pearlin and Schooler, 1978) suggest that stress may have a more severe impact on women than on men.

Table 5 presents eight decompositions of male-female differences in distress. As in other data reported from sample surveys (Dohrenwend and Dohrenwend, 1976; Gove and

TABLE 5. Decomposition of Sex Differences in Self-Reported Distress

Predictors	Impact	Exposure	Interaction	Residual	Total
<i>A. Decomposition of Observed Mean Differences (Men-Women)</i>					
1a Unweighted	-1.55	-.31	.00	.24	-1.62
1b Unweighted with G_1	-.60	-.31	.13	-.84	-1.62
2a Weighted	-3.19	-.19	.24	1.52	-1.62
2b Weighted with G_1	-2.58	-.11	.27	.78	-1.62
<i>B. Decomposition of Predicted Relative Odds* (Men/Women)</i>					
3a Unweighted	-.92	-.09	-.09	.21	.41
3b Unweighted with G_1	-.39	-.11	-.02	-.29	.44
4a Weighted	-1.15	-.14	-.07	.40	.38
4b Weighted with G_1	-1.26	-.05	-.07	.53	.43

Note: Entries have been rounded to two decimal places from computations based on five decimal places. As a result, totals may not correspond exactly to those predicted by adding or multiplying the components.

*See note to Table 3.

Tudor, 1973), the data in this study show that women are, on the average, more distressed than men (72.1 vs. 73.7, $t = 2.8$, $p < .05$). In addition, women are significantly more likely than men to report symptoms of extreme distress (19.9% vs. 11.6%, $t = 3.1$, $p < .05$). The decompositions in both panels A and B show that differential impact is by far the dominant influence on these observed differences.¹⁴

While there is nothing in the data to help us know why this impact differential exists, a more complete analysis of these data presented elsewhere¹⁵ suggests strongly that the less adequate coping strategies of women, compared to those of men, and structural conditions that magnify the subjective stressfulness of objective problems for women account for the greater impact of comparable stress experiences on women than on men.

Marital Status

One of the most consistently documented findings in the epidemiological literature is that the married are in better mental health than the nonmarried (Bachrach, 1975). A number of reasons for this advantage have been hypothesized. First, the married are better buffered psychologically than the unmarried by virtue of the strong emotional attachments that develop between them and their spouses and children. Next, the married are less exposed to stressful life situations than the unmarried because of their greater financial power, political power, and social contacts. Finally, it has been hypothesized (Martin, 1976) that constitutionally fragile persons are selected out of marriage. This is especially true, according to some ac-

counts, for men, since they must be assertive and socially competent in order to attract a spouse. Coupled with the assumed disadvantages of the unmarried with respect to coping resources, this hypothesis suggests strongly that the impact of comparable stressors will be greater among the unmarried than among the married.

In the New Haven data, significant differences in average and extreme distress scores exist between the married and those who are separated or divorced (averages of 73.05 vs. 69.19, $t = 2.55$, $p < .05$; extreme scores of 15% vs. 38%, $t = 2.99$, $p < .05$), but not between the married and either singles or the widowed. Therefore, the decompositions presented in Table 6 contrast the married only with the separated/divorced. In these results we see consistent confirmation of the view that the unmarried are disadvantaged both in being more exposed to stress and in being more highly influenced by stress than the married. The relative importance of these two components varies from one decomposition to another, but the results are consistent in their signs in all eight decompositions. On balance, it would seem that differential impact is more important than differential exposure in the comparison of averages and that the two are equally important in the comparison of extreme distress. These findings, that both components have a role to play in the greater distress of the unmarried, are entirely consistent with recent results of Pearlin and Johnson (1977).

It is not clear from the data why the separated/divorced are more highly influenced than the married by comparable stressors.

TABLE 6. Decomposition of Married-Separated/Divorced Differences in Self-Reported Distress

Predictors	Impact	Exposure	Interaction	Residual	Total
<i>A. Decomposition of Observed Mean Differences (Married-Separated-Divorced)</i>					
1a Unweighted	-4.47	-3.17	.94	2.83	-3.87
1b Unweighted with G_1	-4.71	-2.33	.89	2.30	-3.87
2a Weighted	-7.65	-.27	-1.51	5.58	-3.87
2b Weighted with G_1	-5.52	-.08	-1.02	2.75	-3.87
<i>B. Decomposition of Predicted Relative Odds* (Married/Separated-Divorced)</i>					
3a Unweighted	-2.56	-1.79	1.24	1.67	.24
3b Unweighted with G_1	-2.56	-3.48	3.18	1.56	.27
4a Weighted	-1.09	-.80	.38	-.10	.19
4b Weighted with G_1	-3.33	-1.43	1.19	1.57	.14

Note: Entries have been rounded to two decimal places from computations based on five decimal places. As a result, totals may not correspond exactly to those predicted by adding or multiplying the components.

*See note to Table 3.

Unfortunately, the sample is too small to compare the impact coefficients across pairwise contrasts of the married with the separated, the divorced, the widowed, and the single. It is possible that a detailed comparison of this sort would be able to shed further light on the determinants of the impact differential, for, as Gove (1972) has pointed out, any effect that selects constitutionally fragile people out of marriage will characterize singles and possibly the separated/divorced, but not the widowed. However, the sort of social support disadvantages that accompany being single probably exist for the widowed as well as for singles and the separated/divorced. Therefore, the social selection argument would predict that the impact differentials found in Table 6 would fail to appear in contrasts of the married with the widowed. But the argument that differential social resources account for the greater distress of the unmarried would predict that the very same impact component would appear in the married vs. widowed contrast as was found here for the married vs. separated/divorced contrast.

DISCUSSION

The most general conclusion to be drawn from the above results is that differential impact is an important component in most contrasts between socially advantaged and disadvantaged status categories. Over the last decade there has been a tendency for researchers to focus too narrowly on the hypothesis that "persons in low social status are disproportionately exposed to stressful life events, and that this exposure can explain the higher symptom levels of those with low social status" (Markush and Favero, 1974:184). This differential exposure hypothesis is central to Gove's (1972) sex-role theory of mental illness and to the work of the Dohrenwends (1969) and Myers et al. (1974) on social class and mental illness, to name a few of the most prominent examples. The results of my decomposition analysis show that differential exposure is only part of the story for the contrasts examined in this study. For sex differences, in fact, there is no evidence that differential exposure plays any meaningful role in the greater distress of women.

As I mentioned above, it is extremely dif-

ficult to disentangle the effects of constitutional makeup, social resources, and coping styles on the strength with which stress impacts on emotional functioning. Any or all of these influences could modify the impact of stress. However, the existence of negligible impact components or impact components that show low-status persons to be advantaged allow us to make certain inferences about the forces at work in certain contrasts.

The most obvious point to be made is that contrasts dominated by differential exposure components can usually be assumed to be uninfluenced by constitutional frailty. In the simplest sense this is so because such effects would appear in substantial impact components. However, a more complex sort of reasoning, suggested by Dohrenwend (1966), adds extra weight to this claim. Let us take whites and nonwhites in Table 5. Here differences in mean symptom scores are found to be due overwhelmingly to the greater stresses to which nonwhites are exposed. There is no meaningful impact component in two of the decompositions, and the signs of the components vary in the remaining decompositions. It might be, then, that whites and nonwhites share the same sorts of coping strategies and resources, and also share the same aggregate characteristics in terms of constitutional strengths and frailties. However, to the extent that differences do exist it is almost certainly the case that nonwhites are disadvantaged socioculturally relative to whites (Dohrenwend and Dohrenwend, 1969:49-56). Therefore, if there are any variations in intrapsychic strengths, whites must be disadvantaged relative to nonwhites. The argument here is that the insubstantial impact component found in the white/nonwhite decomposition can be plausibly interpreted as evidence either of completely absent impact effects—including any due to constitutional makeup—or of counterbalancing impact effects of more than one sort. In the latter interpretation the only plausible line of thought suggests that nonwhites have a stronger constitutional makeup than whites.

A similar sort of argument might be made for the relationship between social class and psychological distress. At least this would seem to be the case for the contrasts of extreme distress, where the impact coefficients all show

lower class persons to be less highly influenced by stress than their more socially advantaged counterparts in the middle and upper classes. However, the impact components in the decompositions of mean symptom scores are all positive, which means that impact is higher in the lower class. Much more analysis of this discrepancy between the two types of impact components will be necessary before anything can be said about the importance of constitutional differences in the relationship between social class and distress.

For the remaining two contrasts, between men and women and between the married and the separated/divorced, important impact components appear in the results. Indeed, for both contrasts it would seem that differential impact is more important than differential exposure. Here we come to the grey area in our understanding of sociodemographic variations in emotional distress. We know that women and the unmarried suffer because of relative inability to buffer themselves from the emotional distress accompanying life stresses. But why?

Without direct measures of some of the factors that might plausibly lead to the differential influence of stress, it is extremely difficult to answer this question. Although there are a number of theories about the genetic, neurochemical, and neurobiological factors that might go into constitutional differences, there is no obvious way to index such differences in survey data. However, it is possible to measure coping styles (Pearlin and Schooler, 1978), social support (Cobb, 1976), and many other sociocultural factors that can buffer the impact of stress on distress. By using measures of this sort to interpret impact components, we might be able to tease out the contributions of the various plausible determinants of differential impact described above.

I have not been able to do this in the present paper. However, I feel that future work must move in this direction if we are to disentangle the thorny problems of causation that have so long baffled those of us who study the sociodemographic correlates of mental illness.

NOTES

1. Some emotional problems are less characteristic of socially disadvantaged than of advantaged persons. For instance, women are less likely to

be alcoholics than men (Weissman and Klerman, 1977), and the poor are less likely to be obsessive-compulsive than the rich or upwardly mobile (Langner and Michael, 1963). There is some clinical speculation, in fact, that certain clusters of problems are functionally equivalent, but are structurally more likely to appear in certain persons than in others. Hysteria in women is thought to be an equivalent of sociopathy in men; depression in women to be an equivalent of alcoholism in men. Were it possible to formalize and substantiate these equivalences it might well be that we would conclude, not, as now, that disadvantaged persons are more distressed, but only that they are distressed differently than their more advantaged counterparts. At the present time, though, it is not clear how to make these equivalences formally. The best strategy would seem to be to conduct separate analyses of multiple domains of distress, coupled with systematic assessments of the extent to which causal processes found to trigger one type of problem in one particular category of people parallel the triggering of other types of problems in other categories of people.

2. There are several different versions of the "social selection" argument. One of these suggests that early psychological disability differentially predisposes an individual to fail in economic affairs and in the marriage market. To the extent that the disability is permanent, then, such people will tend to inflate aggregate measures of psychological disability and distress in these status categories. However, since this argument makes no reference to impaired coping abilities, it is not obvious that the people who "drift" into these disadvantaged social statuses will be more highly influenced than other people by stresses that they come to experience as members of these status categories.

A broader selection argument, on the other hand, suggests that predispositions toward distress internal to the individual, determined, in part, by the early childhood environment, and, in part, by genetic, neurochemical, and neurobiological factors unrelated to the adult environment, are more common among the poor than the well-to-do, the unmarried than the married, women than men, and nonwhites than whites. For the poor and for the unmarried such disadvantages in social competence must be due to some sort of social selection process—since these are both acquired statuses. For women and nonwhites, though, arguments about competence usually are based either on factors intrinsic to body chemistry (for women) or on interactions between prenatal environmental assault and genetic predispositions (for nonwhites).

3. At the same time, these life situations can provide resources for dealing with other types of stress. For instance, the lack of financial resources has been hypothesized to be a central determinant of the coping disadvantages of blacks and persons in the lower class (Dohren-

wend and Dohrenwend, 1970). Similarly, physical health can be a resource on which one can draw in coping with certain events that require physical intervention. It is generally the case, in fact, that ongoing life situations or characteristics that can be thought of as stresses can, when considered from another perspective, be considered resources. It is possible, then, that complex interactions exist in the prediction equations considered in this paper. For instance, physical health problems might influence the emotional functioning of a person who lacks financial resources more severely than one who possesses financial resources. Interactions of this type, though, will not be examined in the analyses that follow.

4. Since the scale of emotional distress used in this analysis consists largely of psychophysiological symptoms, great care was taken in constructing the physical illness index. The interview schedule contained a list of some 44 physical health complaints. Some of these were clearly psychosomatic. To create the scale of physical illness, I selected a subset of 16 complaints for which a psychosomatic component is probably of only minor importance. I arbitrarily gave double or triple weights to some of those that I considered on commonsensical grounds to be the most serious.
5. Of the 56 events in the interview schedule, 28 are defined as undesirable, 14 as desirable, and 14 as ambiguous. The ambiguous-events subscale has been omitted here in order to avoid collinearity between the total-events scale and the undesirable- and desirable-events subscales. The overall results of the decomposition are unaffected by the decision to exclude the ambiguous-events scale rather than one of the others. However, this decision would become more important if one were interested in evaluating the significance of specific slope differences (see Note 10), in which case it would be preferable to include all the component scales and exclude the scale of total events.
6. The Myers Desirability-Change Index is drawn up in two steps. First, weighted desirable- and undesirable-event indexes are created that are identical to those I use in this analysis. Next, the two indexes are combined, the desirable-event index being given a positive score and the undesirable-event index a negative score. Respondents who report no events are given a score higher than the highest empirical score obtained among those who report at least one event.

The use of three indexes in the procedure followed in this paper allows the weighting of the desirable and undesirable indexes (implicitly given equal weight in the Myers procedure) as well as their signs (constrained to be +, - for the desirable and undesirable indexes in the Myers procedure) to be estimated empirically. In addition, the use of a dummy variable for those who report no events allows empirical estimation of

their position on the index rather than the constrained assignment of them to the highest score. Given the fact that my three indexes relax three assumptions of the Myers index, it is not surprising to find, as I did in preliminary comparisons, that my three indexes always have higher R^2 values in subsample regressions than does the Myers Desirability-Change Index.

7. Since the stress measures correlate significantly with the Time 2 scale, controlling for the Time 1 score, we know that some real change has taken place in symptoms over time. On the basis of the regression results, this change component can be estimated to be a minimum of 20% of the observed Time 2 symptom scale variance. On the basis of this information, we can adjust the estimate of the scale's reliability upward to a minimum of .6.
8. The decomposition in (2) perfectly decomposes observed mean differences in distress. The decomposition in (4) perfectly decomposes the ratio of the mean predicted log odds of extreme distress. Although the mean of the predicted probabilities does equal the observed probability of extreme distress in the sample, the mean of the predicted log odds does not equal the log of the observed mean odds. Consequently, the "Total" columns in Tables 3-6 vary for predicted relative odds, even though they do not vary for observed mean differences.
9. One possible reason for this is that the event lists are shorter in the weighted scales than in the unweighted scales. Following Myers, only those events that were included in the Holmes and Rahe (1967) events list were made part of the weighted event scales. In the unweighted scales, 28 undesirable, 14 desirable, and 56 total events were included. In the weighted scales, only 16 undesirable and 10 desirable events were included.
10. The theory necessary to develop significance tests for decomposition components has only recently been worked out by Michael Sobel at the University of Wisconsin. No machine-readable procedures for making the tests yet exist. Therefore, no significance tests are presented for the decompositions in Tables 3-6. However, it is possible to evaluate the significance of mean differences across contrast subsamples with t-tests and to evaluate the significance of slope differences either with t-tests or pooled regression models containing interaction terms. An example of this sort of analysis is given in Kessler (1979:Note 4). However, since the purpose here is to describe the major patterns in the data, rather than to make inferences to some broader populations, this type of significance-testing procedure has not been employed.
11. One reviewer suggested that this exception deserves attention because it occurs in one of the most realistic specifications. However, it should be remembered that the weighted scales contain fewer items than the unweighted scales (see Note 9), making inconsistent results based on

- models using these scales somewhat less persuasive than they otherwise might be. In addition, substantive interpretation of the result in row 2b would imply that the same reversal should be found in row 6b. That this reversal does not appear calls a substantive interpretation further into question.
12. It is important to distinguish this clinical notion of *emotional* flexibility from Kohn's (1969) notion of *intellectual* flexibility. A reviewer of an earlier draft commented that there seemed to be a contradiction between my speculation that lower class persons might be emotionally flexible and Kohn's finding that lower class persons are intellectually inflexible. No such contradiction exists, though. Kohn's finding refers to the idea that persons in the lower class "experience conditions of life that foster conceptions of social reality so limited and so rigid as to impair their ability to deal resourcefully with the problematic and stressful" (Kohn, 1977:xliv). The clinical notion of emotional flexibility, on the other hand, refers to the idea that people can be quick or slow to hold back emotional reactions from themselves and others. It is perfectly conceivable that lower class persons could be both intellectually inflexible and emotionally flexible.
 13. The extremely small numbers of respondents who were assigned codes as "Japanese," "Chinese," "Other," or "Unknown" were excluded from this contrast. Only 90 respondents were assigned codes as either "Negro" or "Puerto Rican." These were combined, since neither of these two response categories contained sufficient respondents to warrant separate analysis. It should be noted, though, that the Dohrenwends (1969) have reported certain differences between blacks and Puerto Ricans on scales like the Gurin scale, some of which might reflect differences in response styles. The results obtained for the combined subsample in this paper, then, should be interpreted with caution.
 14. The stresses that have been discussed in the sex-role literature as key determinants of distress among women are thought to be sex-role stresses, ones that are relatively unique to women. The impact of these stresses is captured in the residual components in Table 5. As we see there, though, women have positive residuals in six of the eight decompositions, which suggests that they are less distressed than men net the influences modeled explicitly in the prediction equations. Were unique sex-role stresses actually at work, we would expect to have found negative residuals.
 15. Data available from the author on request.

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